WE CLAIM:

1. A capsule endoscope (CE), comprising:

a shell;

a support having sufficient flexibility such that it can be formed to a contour of the shell;

a substrate having a sensor; the substrate being formed sufficiently thin so that it can be shaped to the contour; and

the substrate coupled with the support such that the combination can be formed to the contour of the shell of the CE.

2. The CE of Claim 1, wherein the substrate coupled with the support such that the combination can be formed to the contour of the shell of the CE, further comprises forming a portion of the shell from the combination.

3. The CE of Claim 2, further comprising a covering that is applied over at least a portion of the shell.

4. The CE of Claim 1, wherein the support has electrical contact pads formed thereon; wherein the sensors of the substrate has electrical contacts; wherein the electrical contacts of the substrate are electrically connected to the electrical contact pads of the support; and wherein electrical connections between the electrical contact pads of the support and the electrical contacts of the optical circuitry of the substrate are encapsulated with a protective covering.

5. The CE of Claim 1, wherein the support is formed of a laminate of polyimide and copper layers; and wherein the substrate is comprised of a silicon substrate.

6. The CE of Claim 1, wherein the support and substrate are arranged inside a protective housing.

7. The CE of Claim 6, wherein the protective housing includes a portion of an optically transmissive surface.

8. The CE of Claim 1, wherein the sensor is from a group of sensors including: a temperature sensor; a pH sensor, an infrared sensor, an imaging sensor, and an active sensor.

9. The CE of Claim 8, further comprising a lens covering the sensor.

10. The CE of Claim 8, wherein the support is selected from a flexible support and a rigid support.

11. The CE of Claim 10, wherein the substrate includes a silicon material.

12. A method for forming a CE having a sensor that follows a contour of a shell associated with the CE; comprising:

bulk removing substrate material from the back side of a substrate of the CE; and

precision removing substrate material from the back side of the substrate until the substrate has a desired thickness that enables the sensor formed on the substrate to be flexed and shaped into a curved configuration to match the contour of shell.

13. The method as in Claim 12, wherein the precision removing step includes reducing stresses in the back side of the substrate.

14. The method of Claim 12, further comprising coupling the substrate to a support.

15. The method of Claim 14, wherein the support is selected from a flexible support and a rigid support.

16. The method of Claim 14, wherein the coupling of the substrate to the support further comprises providing sufficient flexibility such that the combination of the substrate and the support can be shaped into a curved configuration that substantially matches the contour of the shell of the CE.

17. The method of Claim 16, further comprising encapsulating electrical connections between the substrate and the support with a protective coating.

18. The method of Claim 16, further comprising mounting the coupled substrate and support inside a protective housing having an optically transmissive window that enables light to impinge on the sensor of the substrate.

19. A capsule endoscope (CE), comprising:
a shell having a contour;
a sensor made of an organic semiconductor; and
the sensor coupled with the shell such that the combination can be formed to the contour of the shell of the CE.

20. The CE of Claim 19, further comprising a substrate; wherein the substrate is coupled with the sensor to form at least a portion of the shell.

21. The CE of Claim 20, further comprising a covering that is applied over at least a portion of the shell.

22 The CE of Claim 19, wherein the sensor is arranged inside a protective housing.

23. The CE of Claim 22, wherein the protective housing includes a portion of an optically transmissive surface.

24. The CE of Claim 19, wherein the sensor is from a group of sensors including: a temperature sensor; a pH sensor, an infrared sensor, an imaging sensor, and an active sensor.

25. The CE of Claim 19, further comprising a lens covering the sensor.